Lab 1 Homework:

**Google Scholar**

Using Google Scholar, identify threepapers that are of interest to you. After reading through the abstract of those three papers please answer the following questions for each of the papers.

**Paper 1**

**Citation:** Markandya, A. (2007, September 15). *Electricity generation and health*. The Lancet.

**What are the scientists doing?**

They’re investigating the health impacts of electricity generation using different sources.

**What did they find?**

Generating power using fossil fuels has the highest health risks, mainly because of air pollution.

**What assumptions can you make based on their findings?**

Switching to renewable energy would be healthier than most of the power coming from fossil fuels.

**Paper 2**

**Citation:** Kammen, D. M., & Pacca, S. (2004, November 21). *Assessing the costs of electricity*. Annual Review of Environment and Resources.

**What are the scientists doing?**

They’re looking at the costs of electricity generation from various sources and reviewing how different methods affect the true cost of electricity.

**What did they find?**

They found that fossil fuels have a low cost to generate electricity, but a high hidden cost of harming the environment and renewable energy is the opposite with a high initial cost but low harm

**What assumptions can you make based on their findings?**

To get the true cost of generating electricity you have to take into account environmental taxes and things like that, and also that moving toward renewable energy would save money in the long term but fossil fuel energy is cheaper upfront.

**Paper 3**

**Citation:** Fickett, A. P., Gellings, C. W., & Lovins, A. B. (1990). Efficient Use of Electricity. *Scientific American*, *263*(3), 64–75. http://www.jstor.org/stable/24996931

**What are the scientists doing?**

Exploring ways to use electricity more efficiently by reducing waste and harmful impacts on the environment.

**What did they find?**

That we can reduce electricity consumption by using/upgrading to efficient technologies, mostly in lighting, motors, and refrigerators.

**What assumptions can you make based on their findings?**

The more people who upgrade to higher efficient technologies, the lower the demand for electricity will be and there’d be less waste of what’s used. It would lower the cost and slow the harm to the environment.

**Bad Science**

Use the “Bad Science” discussion from lab to help identify two areas of concern in the research paper provided in the “Homework Resources\_01” document on I-Learn.

Copy the section of concern from the paper and paste it on this document. Then provide a brief explanation as to why it would be considered “Bad Science”.

*Example*

“12 children (mean age 6 years [range 3–10], 11 boys) were referred to a pediatric gastroenterology unit with a history of normal development followed by loss of acquired skills, including language, together with diarrhea and abdominal pain.”

12 children is not a good representative sample for all of the population that receives vaccines.

**1st Area of Concern**

“He received a dose of measles, mumps, and rubella vaccine at age 4·5 years, the day after which his mother described a striking deterioration in his behavior that she did link with the immunization.”

This is vague, and while it is a correlation, that doesn’t mean the immunization caused it. It also seems unlikely that the mother could find out the exact effects of the immunization.

**2nd Area of Concern**

“At 18 months he developed recurrent antibiotic-resistant otitis media and the first behavioral symptoms, including disinterest in his sibling and lack of play.”

These behaviors are very common for all children, and the correlation of these things both happening doesn’t actually show that it’s the direct cause.